

GMK3050-2

Product Guide

ASME B30.5
Imperial 85%



Features

- 50 t (55 USt) Capacity
- 40 m (131 ft) five-section main boom
- 8 m (26 ft) swingaway extension
- MAXbase variable positioning outriggers
- Cummins QSL9-C350 T4F/E5 with ZF Traxon transmission
- Manitowoc Crane Control System (CCS)

GROVE GMK3050-2

Features

The GMK3050-2 is designed to be a one-man taxi crane with exceptional compact dimensions and additional storage to maximize your job utilization.

> TWINLOCK™

Boom pinning mechanism automatically pins the sections in position using two horizontal pins. The use of a single telescoping cylinder reduces weight and increases lifting capacities.



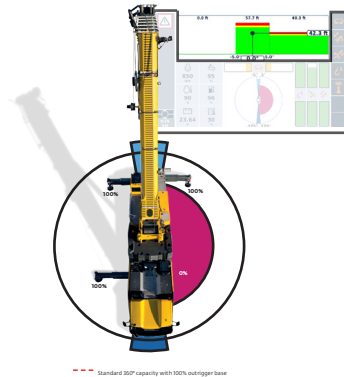
> Crane Control System (CCS)

The new crane control system (CCS) offers a user-friendly interface, two full graphic displays mounted vertically for better visibility, a jog dial for easier data input and ergonomic joysticks.



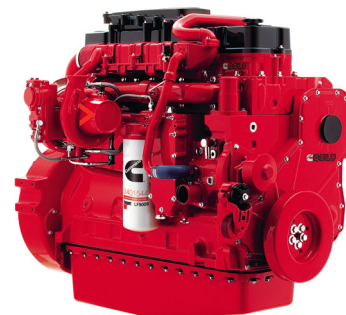
> MAXbase Variable Outrigger Positioning System

MAXbase calculations improve load charts with symmetrical outrigger positioning. The four sector formula allows an increased working range beyond the 360 degree load charts.



> Engine

Cummins QSL9, 6 cylinder in-line, water cooled, turbo charged engine. High pressure fuel injection system, electronic engine management, and meets all Tier 4 Final/ Euromot 5 requirements.



Jobsite benefits

- Higher and stronger. With a maximum boom and extension length of 47.9 m (157 ft) the crane can still lift 5 t (11,000 lbs).
- Permitting can be achieved for an all-in-one package and remain within 12 t/axle (26,420 lbs per axle).
- Three outrigger positions provide ultimate flexibility for job sites with the ability to position the crane in tighter spaces.
- MEGATRAK™ independent suspension, all-wheel steering system and steer by wire technology provides increased ground clearance, adjustable suspension and reduces tire-wear to provide maximum maneuverability in all-terrains.
- Compact length and a minimum width of 2,55 m (8.4 ft) allow access to even the most narrow of jobsites, while optimizing crane set up and lifting position.
- The new Boom Configurator mode thru the Crane Control System (CCS) simplifies the telescoping process and allows for quick on-board lift planning.



Manitowoc Crane Care

Manitowoc Crane Care when you need it.
The assurance of the world's most advanced crane service and support to get you back to work fast.

Manitowoc Finance

Manitowoc Finance helps you get right to work generating profits for your business.
Financial tools that help you capitalize on opportunity with solutions that fit your needs.

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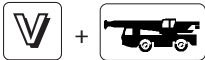
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Data



Lifting Capacity	Sheaves	Weight	Parts of line	Possible load with crane*
63 t (69 USt)	5	600 kg (1,322 lb)	2 - 10 t / --11	50 t (65 USt)**
40 t (44 USt)	3	400 kg (882 lb)	2 - 7	35 t (38 USt)
16 t (17.6 USt)	1	250 kg (551 lb)	1 - 3	15 t (16.5 USt)
8 t (9 USt)	Overhaul Weight	200 kg (440 lb)	1	5 t (5.5 USt)

** Requires additional boom nose sheave



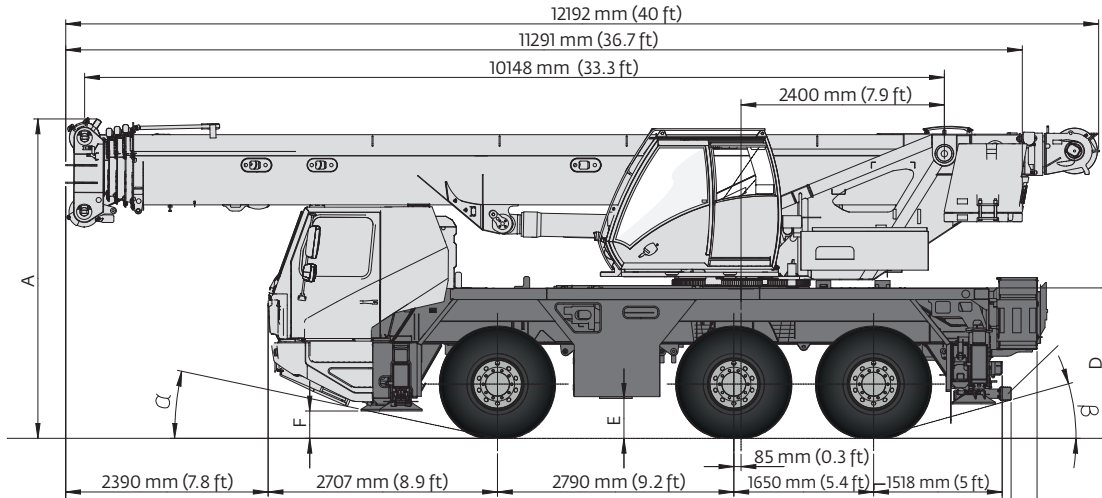
	1	2	3	4	5	6	7	8	9	10	11	12	R1	R2	
mph	3.2	4	5.2	6.7	8.5	10.9	14.4	18.5	23.8	30.5	38.8	49.7	3.4	4.3	82 %
	14.00 R25														



	Infinitely variable	Rope	Max. Single line pull
	0 - 125 m/min (410fpm) Single line	170m (558ft)	50 kN (11,240 lb)
	0 - 125 m/min (410fpm) Single line	170m (558 ft)	50kN (11,240 lb)
	0 - 2,2 min ⁻¹		
	-2,7° to + 82° < 40 s		
	10.2 to 40.0m (33.5 ft-131 ft)		

Weights

Boom over front




Boom over front

Basic weights - kg lb	Axle 1		Axles 2 and 3		Total	
Cummins power, 26 ft swingaway including brackets, 16.00R25 tires on aluminum wheels, 6x4x6 drive/steer, 2nd oil cooler, auxiliary boom nose, auxiliary hoist, 7500 kg (16,535 lb) counterweight fixed to the superstructure, polymer outrigger pads, five-sheave 63 t (69 USt) hook block, driver and tanks filled.	11,720 kg	25,850 lb	23,760 kg	52,380 lb	35,480 kg	78,230 lb
Additions:						
6x6x6 drive/steer	379 kg	836 lb	19 kg	42 lb	398 kg	878 lb
Electric driveline retarder	-17 kg	-37 lb	186 kg	411 lb	170 kg	375 lb
Spare wheel 14.00 R25 XGC steel rim with stowage	-183 kg	-403 lb	454 kg	1000 lb	271 kg	597 lb
Spare wheel 16.00 R25 XGC steel rim with stowage	-219 kg	-482 lb	543 kg	1196 lb	324 kg	714 lb
Spare wheel 20.5 R25 XGC steel rim with stowage	-261 kg	-576 lb	648 kg	1429 lb	387 kg	853 lb
Substitutions:						
14.00R25 tires	-106 kg	-234 lb	-212 kg	-467 lb	-318 kg	-701 lb
20.5R25 tires	126 kg	278 lb	252 kg	556 lb	-354 kg	-780 lb


Working range

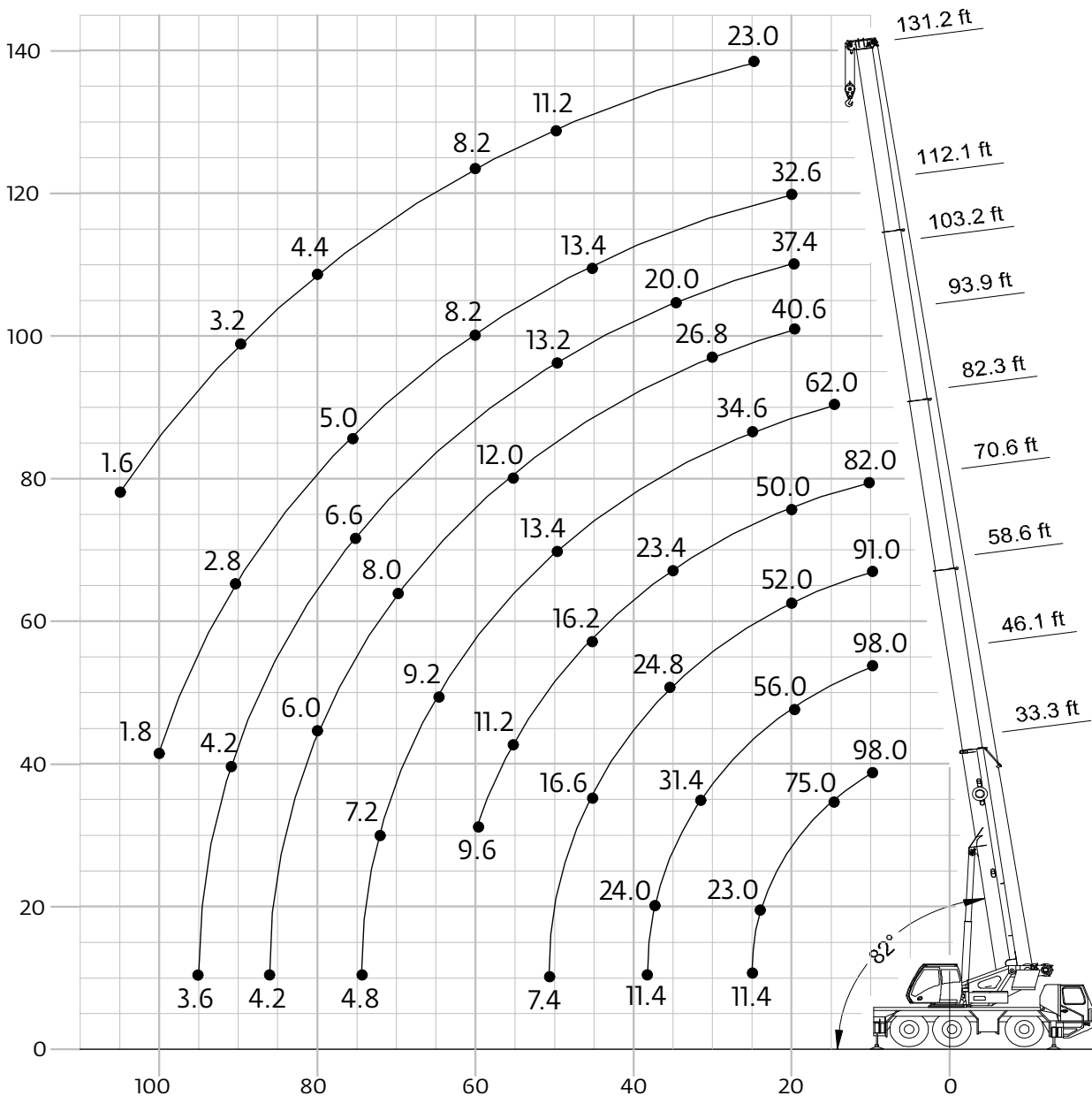
Main boom

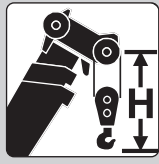
 10,2 - 40,0 m
(33 ft - 131.2 ft)

 6,2 m
(20.3 ft)

 360°

 7,5 t
(16,500 lbs)



	Hook block (t)	USt
	63 S/D	69
	40 S/D	44
	16 S	17.6
	8 H/B	9

* Over rear with additional equipment.

Load chart

Main boom



10,2 - 40,0 m
(33 ft - 131.2 ft)



6,2 m
(20.3 ft)



360°



7,5 t
(16,500 lbs)



Pounds x 1000

Feet	33.5	44.9-46.1	56.6-58.6	69.5-70.6	78.3-82.3	92.5-93.9	102.5-105.7	112.1-114.5	118.5	126.2	131.2
10	98.0	98.0	91.0	82.0							
15	75.0	75.0	72.0	67.0	62.0						
20	55.0	56.0	52.0	50.0	46.0	40.6	37.4	32.6			
25	23.8	41.4	38.6	37.5	34.6	32.6	31.4	30.6	26.0	25.4	23.0
30		31.4	30.6	29.0	27.0	26.8	24.6	24.2	23.4	23.8	22.2
35		24.0	24.8	23.4	21.6	21.8	20.0	19.6	20.6	19.6	19.2
40			20.2	19.4	17.8	18.0	18.0	16.2	17.0	16.2	15.8
45			16.6	16.2	14.8	16.0	15.4	13.4	14.4	13.6	13.2
50			7.4	13.4	13.4	13.8	13.2	11.4	12.2	11.6	11.2
55				11.2	12.2	12.0	11.4	9.6	10.6	9.8	9.6
60				9.6	10.6	10.4	9.8	8.2	9.0	8.4	8.2
65					9.2	9.2	8.6	6.8	7.8	7.2	7.0
70					7.2	8.0	7.6	5.8	6.8	6.2	6.0
75						6.8	6.6	5.0	6.0	5.4	5.2
80						6.0	5.6	4.2	5.2	4.6	4.4
85						4.2	4.8	3.4	4.4	3.8	3.8
90							4.2	2.8	3.8	3.4	3.2
95							3.6	2.2	3.2	2.8	2.6
100								1.8	2.6	2.2	2.2
105								1.4	2.2	1.8	1.6
110									1.8	1.4	

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.
The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

Working range

Swingaway with (manual offset)



27,7 - 40,0 m
(90.8 ft - 131.2 ft)



8 m
(26 ft)



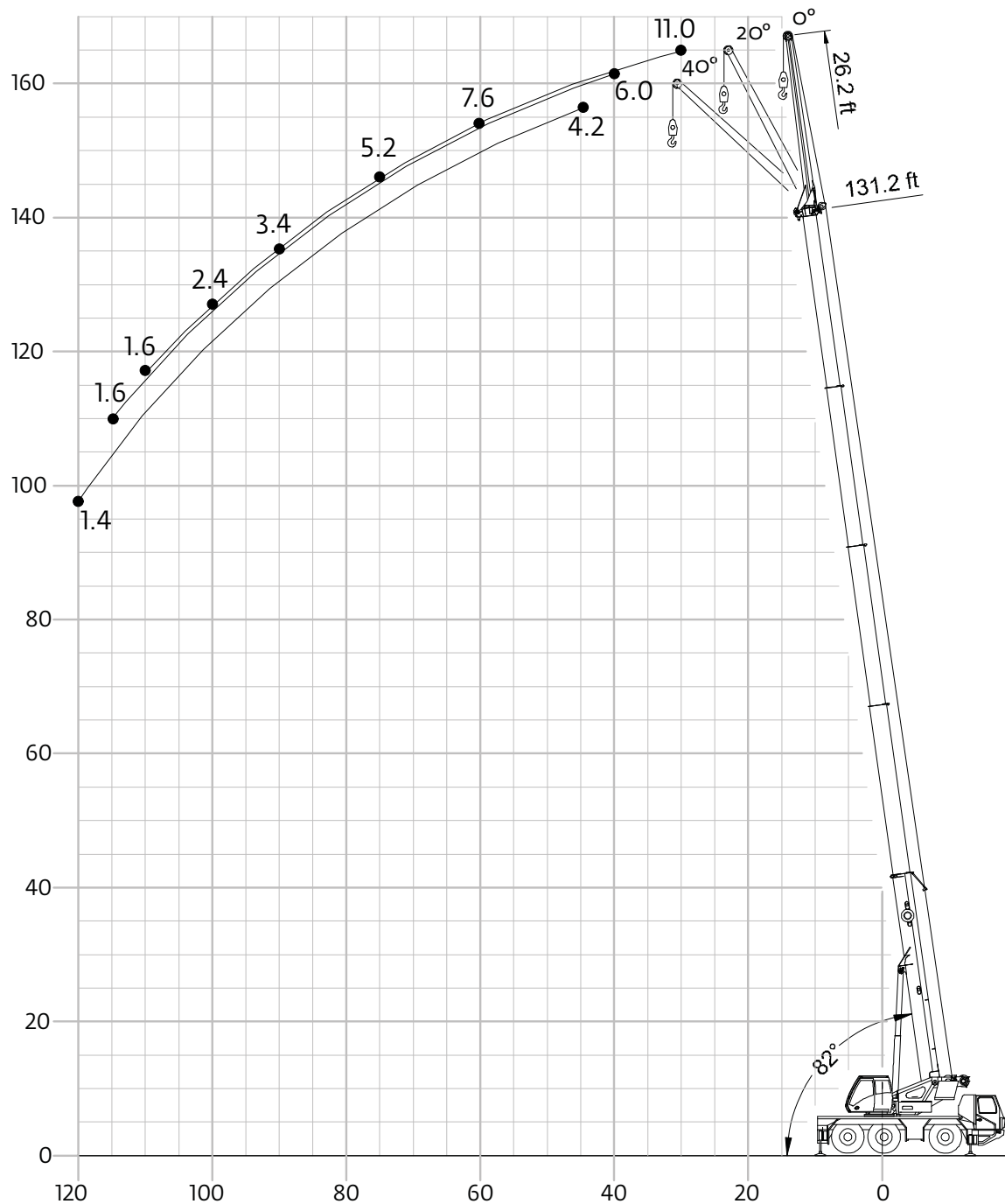
6,2 m
(20.3 ft)



360°



7,5 t
(16,500 lbs)



Load chart

Swingaway with (manual offset)



27,7 - 40,0 m
(90.8 ft - 131.2 ft)



8 m
(26 ft)



6,2 m
(20.3 ft)



360°



7,5 t
(16,500 lbs)



Pounds x 1000

Feet	90.8-92.5			105.7			131.2		
	0°	20°	40°	0°	20°	40°	0°	20°	40°
20	11.0								
25	11.0			11.0					
30	10.6	6.4		10.8	6.4		11.0		
35	9.8	6.0	4.4	9.8	6.2		10.4		
40	8.8	5.8	4.2	9.0	5.8	4.4	9.8	6.0	
45	8.2	5.4	4.2	8.4	5.6	4.2	9.2	5.8	4.2
50	7.6	5.2	4.0	7.8	5.2	4.0	8.6	5.6	4.2
55	7.0	5.0	4.0	7.4	5.0	4.0	8.0	5.4	4.2
60	6.6	4.8	3.8	6.8	4.8	4.0	7.6	5.2	4.0
65	6.2	4.6	3.8	6.4	4.6	3.8	7.0	5.0	4.0
70	5.8	4.4	3.8	6.0	4.6	3.8	6.2	4.8	3.8
75	5.4	4.2	3.6	5.8	4.4	3.8	5.2	4.8	3.8
80	5.0	4.2	3.6	5.4	4.2	3.8	4.6	4.6	3.8
85	4.8	4.0	3.6	5.2	4.2	3.6	4.0	4.4	3.8
90	4.6	4.0	3.6	4.6	4.0	3.6	3.4	3.8	3.8
95	4.4	3.8	3.4	4.2	4.0	3.6	2.8	3.2	3.6
100	4.0	3.8	2.9	3.6	3.8	3.6	2.4	2.8	3.0
105	3.6	2.0	2.0	3.0	3.4		2.0	2.4	2.6
110				2.6	2.8		1.6	2.0	2.2
115				2.2	2.4			1.6	1.8
120				1.8					1.4

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

Specifications

Superstructure



Boom

10,2 m to 40,0 m (33 ft -131.2 ft) five section TWIN-LOCK® boom. Maximum tip height 42 m (138 ft).



Boom elevation

1 cylinder with safety valve, boom angle from -2,7° to +82°.



Load moment and independent anti-two block system

Load moment and independent anti-two block system with audio visual warning and control lever lock-out. These systems provide graphic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition with lock-out hoist function.



Cab

Aluminum, tiltable (approx. 20°), full vision, safety glass, adjustable operator's seat with suspension, engine-independent heater. Armrest-integrated crane controls. Ergonomically arranged instrumentation and crane operating controls. Drive/steer controls.



Slewing

Axial piston fixed displacement motor, planetary gear, service brake and holding brake.



Counterweight

7,500kg (16,500 lb) fixed to the superstructure.



Hydraulic system

2 separate pump circuits operating in an open circuit with 1 axial piston variable displacement pump (load sensing) and 1 geared constant delivery pump for slewing. Thermostatically controlled oil cooler. Tank capacity: 600 l (159 gal).



Control system

Full electronic control of all crane movements using electrical control levers with automatic reset to zero. Integrated with the LMI and engine management system by CAN-BUS. Crane Control System (CCS) with graphic display.



Hoist

Axial piston motor with planetary gear and brake. Drum rotation indicator.

* Optional equipment

- 8 m (26 ft) swingaway manual offset 0°, 20°, 40°
- Auxiliary hoist
- Retractable cab foot walk
- Turntable mounted tool box
- Comfort package
- Camera system for hoist
- Automatic centralized lubrication for superstructure

Carrier



Chassis

Special 3-axle chassis, all-welded torsion-resistant box type construction in high strength steel.



Outriggers

4 hydraulically telescoping beams with vertical cylinders and outrigger pads. Independent horizontal and vertical movement control on each side of carrier and from the crane operator's cab. Electronic level indicator with automatic leveling system.



Engine

Cummins QSL9 - C 350, diesel, 6-cylinder in-line, water cooled turbocharged and intercooled, 254 kW (340 HP), max torque 1526 Nm (1,125 ft/lb). Fuel tank capacity: 400 (105 gal). Engine emission: Euromot Stage 5 / EPA / CARB Tier 4 Final (non road).



Transmission

ZF Traxon automatic, 12 forward and 2 reverse speeds. Single speed transfer case with inter-axle differential lock.



Drive/Steer

6 x 4 x 6.



Axle lines

3 axle lines. Axle lines 1, 2 and 3 steered, 2 and 3 driven.



Suspension

MEGATRAK®. All wheels with independent hydropneumatic suspension and hydraulic lockout. Longitudinal and transverse level control with automatic on-highway leveling system. Range +170 mm/-130 mm (+6.7 in / -5.1 in).



Tires

6 tires, 385/95 R25 (14.00 R25)



Steering

Dual circuit, Servocom power steering with emergency steering pump. Separate steering of the 3rd axle line for all-wheel steering and crabbing.



Brakes

Service brake: pneumatic dual circuit, acting on all wheels, air dryer. Anti-lock braking system (ABS). Permanent brake: exhaust brake and constant throttle brake. Parking brake: pneumatically operated spring-loaded brake, acting on 1st and 3rd axle lines.



Cab

Aluminum, 2-man-design, safety glass, driver seat with pneumatic suspension, engine-dependent hot water heater. Complete instrumentation and driving controls. 60° tilt forward for engine access.



Electrical system

Three-phase alternator 28 V/100A, 2 batteries 12 V/170 Ah. Lighting system and signals 24 V.

* Optional equipment

- 6 x 6 x 6
- Electric driveline retarder
- 6 tires, 445/95 R25 (16.00 R25) - Vehicle width 2,75 m
- 6 tires, 525/80 R25 (20.5 R25) - Vehicle width 2,85 m
- Spare tire and wheel

*Further optional equipment upon request.

Symbols glossary



Auxiliary hoist



Carrier frame



Gradeability



Outriggers



Axles



Counterweight



Hookblock / Capacity



Radius



Axle load



Crane functions



Hydraulic system



Slewing/Working range



Boom



Crane travel



Lattice extension



Speed



Boom elevation



Drive/Steer



Lattice extension (luffing)



Suspension



Boom telescoping



Electrical system



Luffing Jib



Transmission / Gear



Brakes



Engine



Low range



Travel speed



Cab



Free on wheels



Main hoist



Tires

Notes

Notes

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